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FILE 'HOME' ENTERED AT 18:52:08 ON 19 NOV 2008

=> file caplus

COST IN U.S. DOLLARS

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ENTRY

SESSION

FULL ESTIMATED COST

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FILE COVERS 1907 - 19 Nov 2008 VOL 149 ISS 21

FILE LAST UPDATED: 18 Nov 2008 (20081118/ED)

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=> e us20050208327/pn

E1 1 US20050208325/PN

E2 1 US20050208326/PN

E3 1 --> US20050208327/PN

E4 1 US20050208328/PN

E5 1 US20050208329/PN

E6 1 US20050208330/PN

E7 1 US20050208331/PN

E8 1 US20050208332/PN

E9 1 US20050208333/PN

E10 1 US20050208334/PN

E11 1 US20050208335/PN

E12 1 US20050208336/PN

=> s e3

L1 1 US20050208327/PN

=> d all

L1 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

AN 2005:1026523 CAPLUS

DN 143:335928

ED Entered STN: 23 Sep 2005

TI White organic light-emitting devices with improved performance with hole-transporting layers containing light-emitting naphthacene derivatives

IN Begley, William J.; Hatwar, Tukaram K.; Rajeswaran, Manju; Andrievsky,
Natasha
PA USA
SO U.S. Pat. Appl. Publ., 49 pp.
CODEN: USXXCO
DT Patent
LA English
IC ICM H05B033-14
INCL 428690000; 428917000; 428332000; 313504000; 313506000; 313112000;
257098000
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
Properties)
Section cross-reference(s): 25, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 20050208327	A1	20050922	US 2004-801997	20040316 <--
	WO 2005093008	A1	20051006	WO 2005-US6823	20050302
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1725631	A1	20061129	EP 2005-724382	20050302
	EP 1725631	B1	20080423		
	R:	DE, FR, GB			
	JP 2007529597	T	20071025	JP 2007-503929	20050302
	KR 2007010004	A	20070119	KR 2006-718888	20060914
PRAI	US 2004-801997	A	20040316		
	WO 2005-US6823	W	20050302		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 20050208327	ICM	H05B033-14
	INCL	428690000; 428917000; 428332000; 313504000; 313506000; 313112000; 257098000
	IPCI	H05B0033-14 [ICM,7]
	IPCR	C09K0011-06 [I,C*]; C09K0011-06 [I,A]; H01L0051-00 [I,C*]; H01L0051-00 [I,A]; H01L0051-05 [I,C*]; H01L0051-30 [I,A]; H01L0051-50 [I,C*]; H01L0051-50 [I,A]; H05B0033-14 [I,C*]; H05B0033-14 [I,A]
	NCL	428/690.000; 257/098.000; 313/112.000; 313/504.000; 313/506.000; 428/332.000; 428/917.000
	ECLA	C09K011/06; H01L051/00M6D4; H01L051/00M6H; H01L051/50E8; H05B033/14; M09K; M09K; M09K; M09K; M09K; M09K; M09K; M09K; M09K; M09K; M09K; T01L; T01L; T01L; T01L; T01L; T01L; T01L; T01L; M09K
WO 2005093008	IPCI	C09K0011-06 [ICM,7]; H05B0033-14 [ICS,7]; H01L0051-20 [ICS,7]; H01L0051-30 [ICS,7]; H01L0051-05 [ICS,7,C*]
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M09K; M09K; M09K; M09K; M09K; T01L; T01L; T01L; T01L;
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 [I,A]; H01L0051-05 [I,C*]; C09K0011-06 [I,C];
 C09K0011-06 [I,A]; H01L0051-50 [I,C]; H01L0051-50
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 [I,A]; H05B0033-14 [I,C]; H05B0033-14 [I,A]
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 H01L051/50E8; H05B033/14; M09K; M09K; M09K; M09K; M09K;
 M09K; M09K; M09K; M09K; M09K; T01L; T01L; T01L; T01L;
 T01L; T01L; T01L; T01L; T01L; T01L; T01L; M09K
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 H01L0051-30 [I,A]; H01L0051-50 [I,C]; H01L0051-50
 [I,A]; H05B0033-14 [I,C*]; H05B0033-14 [I,A];
 H05B0033-26 [I,C]; H05B0033-26 [I,A]
 FTERM 3K107/AA01; 3K107/BB01; 3K107/CC02; 3K107/CC03;
 3K107/CC09; 3K107/CC21; 3K107/CC24; 3K107/CC45;
 3K107/DD27; 3K107/DD44Y; 3K107/DD51; 3K107/DD53;
 3K107/DD59; 3K107/DD60; 3K107/DD64; 3K107/DD67;
 3K107/DD68; 3K107/DD71; 3K107/DD72; 3K107/DD73;
 3K107/DD74; 3K107/DD78; 3K107/DD80; 3K107/EE03;
 3K107/EE22; 3K107/FF05; 3K107/FF14; 3K107/FF15
 KR 2007010004 IPCI C09K0011-06 [I,A]; H01L0051-05 [I,A]; H01L0051-30 [I,A]
 OS MARPAT 143:335928

AB Organic light-emitting diodes producing white light comprising an anode, a
 hole-transporting layer disposed over the anode, a blue light-emitting
 layer disposed over the hole-transporting layer, an electron-transporting
 layer disposed over the blue light-emitting layer, and a cathode disposed
 over the electron-transporting layer are described in which the
 hole-transporting layer comprises an entire layer or a partial portion of
 a layer in contact with the blue light-emitting layer and contains a
 selected light-emitting naphthacene derivative (especially a rubrene
 derivative).

ST rubrene deriv white org electroluminescent device hole transporting layer;
 naphthacene deriv white org electroluminescent device hole transporting
 layer

IT Electroluminescent devices
 (organic; white organic light-emitting devices with hole-transporting layers
 containing light-emitting naphthacene derivs.)

IT Luminescent substances
 (white organic light-emitting devices with hole-transporting layers
 containing
 light-emitting naphthacene derivs.)

IT 147-14-8, Copper phthalocyanine 1428-67-7D, DPN, derivs. 7429-90-5,
 Aluminum, uses 7789-24-4, Lithium fluoride, uses 11099-20-0
 12798-95-7 23786-72-3 37271-44-6 42029-62-9 51311-17-2, Carbon
 fluoride 55035-43-3 55035-43-3D, derivs. 80663-92-9,
 2,5,8,11-Tetra-tert-butyl perylene 122648-99-1 122648-99-1D, derivs.
 123847-85-8, NPB 124729-98-2, m-MTDATA 155306-71-1, C545T
 221455-80-7 256425-63-5, C545TB 274905-73-6 274905-73-6D, derivs.
 574749-25-0 676120-51-7 676120-52-8 676120-53-9 676120-54-0
 676120-55-1 676120-56-2 676120-57-3 676120-58-4 676120-59-5
 676120-60-8 862501-00-6 862501-00-6D, derivs.

RL: DEV (Device component use); USES (Uses)

(white organic light-emitting devices with hole-transporting layers
 containing

```

        light-emitting naphthacene derivs.)
IT  118769-17-8    682806-51-5    850755-32-7    850755-33-8    850755-34-9
      850755-36-1    850755-40-7    850755-41-8    850755-42-9    850755-44-1
      850755-45-2    850755-46-3    850765-58-1    850765-59-2    850765-60-5
      850765-61-6    850765-62-7    850765-63-8    850765-64-9    850765-67-2
      850765-68-3    850765-70-7    850765-71-8    850797-15-8    850797-16-9
      850797-17-0    850797-18-1    850797-19-2    850797-20-5    850797-21-6
      850797-22-7    850797-23-8    850797-24-9    850797-25-0    850833-50-0
      850833-51-1    865093-41-0
      RL: DEV (Device component use); MOA (Modifier or additive use); USES
      (Uses)
      (white organic light-emitting devices with hole-transporting layers
containing
      light-emitting naphthacene derivs.)
IT  850797-14-7P
      RL: DEV (Device component use); MOA (Modifier or additive use); SPN
      (Synthetic preparation); PREP (Preparation); USES (Uses)
      (white organic light-emitting devices with hole-transporting layers
containing
      light-emitting naphthacene derivs.)
IT  772-38-3    15796-82-4
      RL: RCT (Reactant); RACT (Reactant or reagent)
      (white organic light-emitting devices with hole-transporting layers
containing
      light-emitting naphthacene derivs.)
IT  850797-13-6P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
      (white organic light-emitting devices with hole-transporting layers
containing
      light-emitting naphthacene derivs.)

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FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

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SINCE FILE
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TOTAL
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6.65

TOTAL
SESSION
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STRUCTURE FILE UPDATES: 18 NOV 2008 HIGHEST RN 1073232-10-6
DICTIONARY FILE UPDATES: 18 NOV 2008 HIGHEST RN 1073232-10-6

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<http://www.cas.org/support/stngen/stndoc/properties.html>

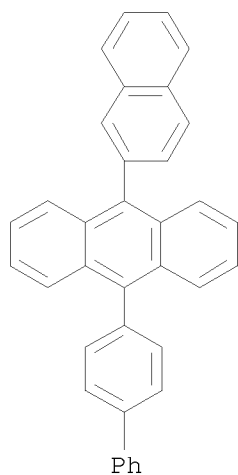
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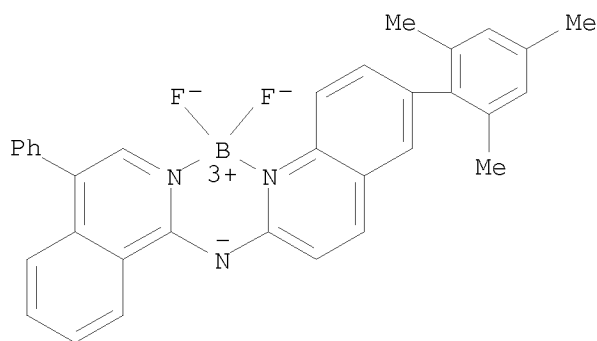
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 ED Entered STN: 06 Sep 2005
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 DR 909099-92-9
 MF C36 H24
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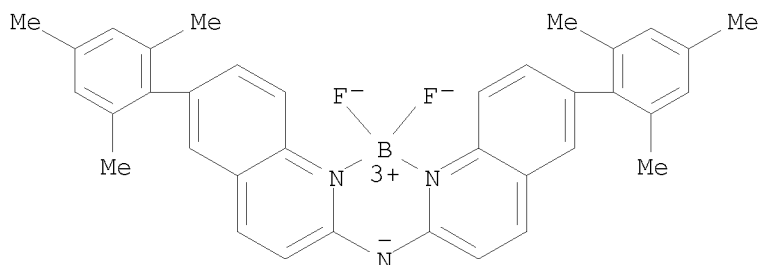
39 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
40 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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RN 676120-57-3 REGISTRY
ED Entered STN: 19 Apr 2004
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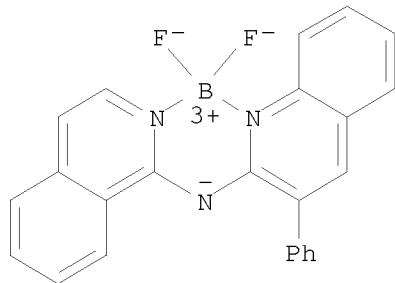
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ED Entered STN: 19 Apr 2004
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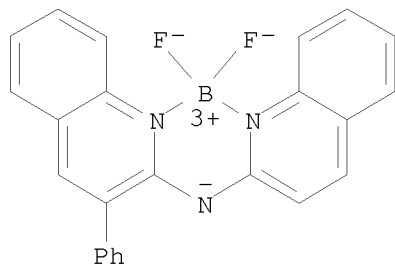
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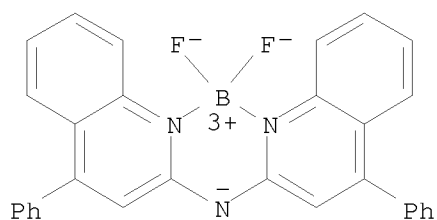
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 LC STN Files: CA, CAPLUS, USPATFULL



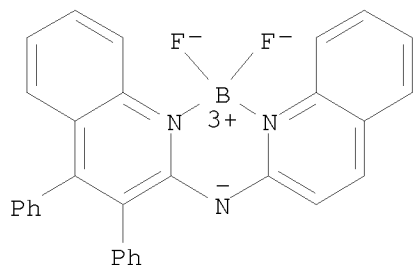
3 REFERENCES IN FILE CA (1907 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 6 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 676120-53-9 REGISTRY
 ED Entered STN: 19 Apr 2004
 CN Boron, difluoro[4-phenyl-N-(4-phenyl-2-quinolinyl- κ N)-2-quinolinaminato- κ N1]-, (T-4)- (9CI) (CA INDEX NAME)
 MF C30 H20 B F2 N3
 CI CCS
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL



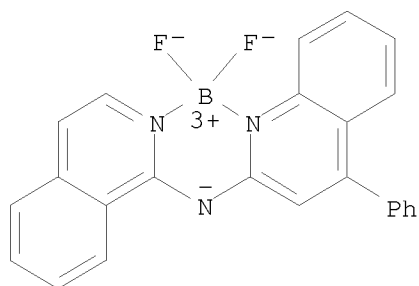
3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 676120-52-8 REGISTRY
ED Entered STN: 19 Apr 2004
CN Boron, [3,4-diphenyl-N-(2-quinolinyl-κN)-2-quinolinaminato-κN1]difluoro-, (T-4)- (CA INDEX NAME)
MF C30 H20 B F2 N3
CI CCS
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



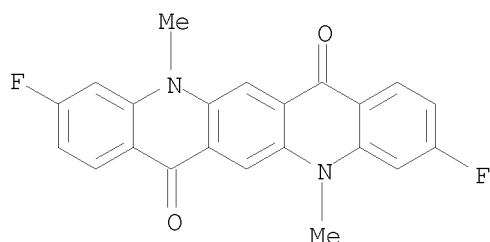
3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 8 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 676120-51-7 REGISTRY
ED Entered STN: 19 Apr 2004
CN Boron, difluoro[N-(1-isoquinolinyl-κN)-4-phenyl-2-quinolinaminato-κN1]-, (T-4)- (CA INDEX NAME)
MF C24 H16 B F2 N3
CI CCS
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

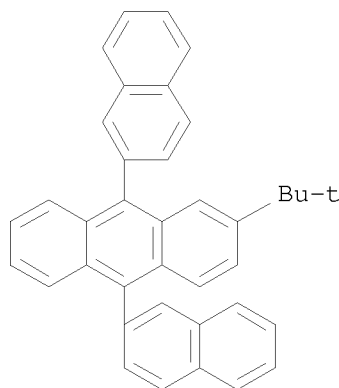
L2 ANSWER 9 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 574749-25-0 REGISTRY
ED Entered STN: 28 Aug 2003
CN Quino[2,3-b]acridine-7,14-dione, 3,10-difluoro-5,12-dihydro-5,12-dimethyl-
(CA INDEX NAME)
DR 776334-87-3, 847696-22-4
MF C22 H14 F2 N2 O2
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

12 REFERENCES IN FILE CA (1907 TO DATE)
12 REFERENCES IN FILE CAPLUS (1907 TO DATE)

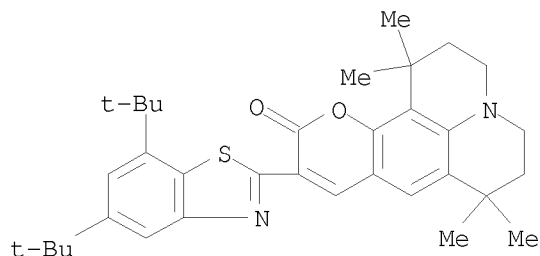
L2 ANSWER 10 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 274905-73-6 REGISTRY
ED Entered STN: 06 Jul 2000
CN Anthracene, 2-(1,1-dimethylethyl)-9,10-di-2-naphthalenyl- (CA INDEX NAME)
OTHER NAMES:
CN 2-tert-Butyl-9,10-bis(2-naphthyl)anthracene
CN 2-tert-Butyl-9,10-di(2-naphthyl)anthracene
CN 9,10-Di(naphthalen-2-yl)-2-tert-butylantracene
CN TBADN
MF C38 H30
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, TOXCENTER, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

217 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
219 REFERENCES IN FILE CAPLUS (1907 TO DATE)

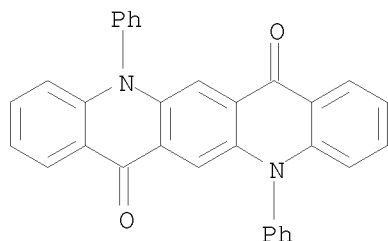
L2 ANSWER 11 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 256425-63-5 REGISTRY
ED Entered STN: 21 Feb 2000
CN 1H,5H,11H-[1]Benzopyrano[6,7,8-ij]quinolizinin-11-one,
10-[5,7-bis(1,1-dimethylethyl)-2-benzothiazolyl]-2,3,6,7-tetrahydro-
1,1,7,7-tetramethyl- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN C 545TB
CN Coumarin 545TB
MF C34 H42 N2 O2 S
SR CA
LC STN Files: CA, CAPLUS, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

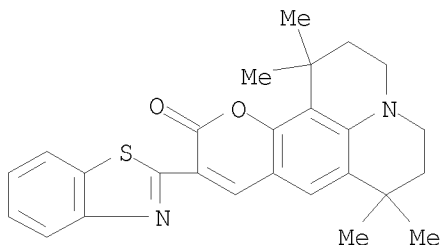
L2 ANSWER 12 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 221455-80-7 REGISTRY
ED Entered STN: 22 Apr 1999
CN Quino[2,3-b]acridine-7,14-dione, 5,12-dihydro-5,12-diphenyl- (CA INDEX
NAME)
OTHER NAMES:
CN Diphenylquinacridone
CN N,N'-Diphenylquinacridone
DR 863719-29-3
MF C32 H20 N2 O2
SR CA
LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

44 REFERENCES IN FILE CA (1907 TO DATE)
45 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 13 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 155306-71-1 REGISTRY
ED Entered STN: 25 May 1994
CN 1H,5H,11H-[1]Benzopyrano[6,7,8-ij]quinolizin-11-one,
10-(2-benzothiazolyl)-2,3,6,7-tetrahydro-1,1,7,7-tetramethyl- (CA INDEX
NAME)
OTHER NAMES:
CN 10-(2-Benzothiazolyl)-1,1,7,7-tetramethyl-2,3,6,7-tetrahydro-1H,5H,11H-
[1]benzopyrano[6,7,8-ij]quinolizin-11-one
CN C 545T
CN Coumarin 545T
CN NKX 1595
DR 298699-87-3
MF C26 H26 N2 O2 S
SR CA
LC STN Files: CA, CAPLUS, CHEMCATS, USPAT2, USPATFULL

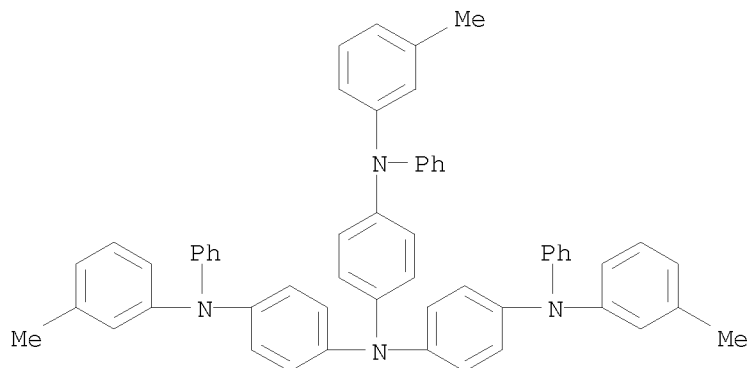


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

326 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
327 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 14 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 124729-98-2 REGISTRY
ED Entered STN: 12 Jan 1990
CN 1,4-Benzenediamine, N1-(3-methylphenyl)-N4,N4-bis[4-[(3-methylphenyl)phenylamino]phenyl]-N1-phenyl- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,4-Benzenediamine, N-(3-methylphenyl)-N',N'-bis[4-[(3-methylphenyl)phenylamino]phenyl]-N-phenyl- (9CI)
OTHER NAMES:
CN 4,4',4'''-Tris[(3-methylphenyl)phenylamino]triphenylamine
CN 4,4',4'''-Tris[N-(3'''-methylphenyl)-N-phenylamino]triphenylamine
CN 4,4',4'''-Tris[N-(3-methylphenyl)-N-phenylamino]triphenylamine
CN 4,4',4'''-Tri[N-(methylphenyl)-N-phenylamino]triphenylamine
CN m-MTDATA
CN MTDATA
CN Tris[4-[phenyl(3-methylphenyl)amino]phenyl]amine
DR 274674-20-3
MF C57 H48 N4
SR CA

LC STN Files: BEILSTEIN*, CA, CAPLUS, CASREACT, CHEMCATS, TOXCENTER,
 USPAT2, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

820 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 824 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 15 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN

RN 123847-85-8 REGISTRY

ED Entered STN: 17 Nov 1989

CN [1,1'-Biphenyl]-4,4'-diamine, N4,N4'-di-1-naphthalenyl-N4,N4'-diphenyl-
 (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN [1,1'-Biphenyl]-4,4'-diamine, N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI)

OTHER NAMES:

CN α -NPD

CN 4,4'-Bis[(1-naphthyl)phenylamino]-1,1'-biphenyl

CN 4,4'-Bis[N-(1-naphthyl)-N-phenylamino]biphenyl

CN 4,4'-Bis[N-phenyl-N-(1''-naphthyl)amino]biphenyl

CN 4,4'-Bis[phenyl(naphthalen-1-yl)amino]-1,1'-biphenyl

CN N,N'-Biphenyl-N,N'-bis(1-naphthyl)[1,1'-biphenyl]-4,4'-diamine

CN N,N'-Biphenyl-N,N'-bis-(1-naphthenyl)-[1,1'-biphenyl]-4,4'-diamine

CN N,N'-Bis(α -naphthyl)-N,N'-diphenyl-1,1'-biphenyl-4,4'-diamine

CN N,N'-Bis(α -naphthyl)-N,N'-diphenylbenzidine

CN N,N'-Bis(1-naphthyl)-N,N'-diphenyl-1,1'-biphenyl-4,4'-diamine

CN N,N'-Bis(1-naphthyl)-N,N'-diphenyl-4,4'-benzidine

CN N,N'-Bis(naphthalen-1-yl)-N,N'-diphenylbenzidine

CN N,N'-Di(1-naphthyl)-N,N'-diphenyl-4,4'-diaminobiphenyl

CN N,N'-Di(naphthalen-1-yl)-N,N'-diphenylbenzidine

CN N,N'-Di(naphthalen-1-yl)-N,N'-diphenylbenzidine

CN N,N'-Di-1-naphthyl-N,N'-diphenylbenzidine

CN N,N'-Diphenyl-N,N'-bis(α -naphthyl)-1,1'-biphenyl-4,4'-diamine

CN N,N'-Diphenyl-N,N'-bis(1-naphthyl)-1,1'-biphenyl-4,4'-diamine

CN N,N-Bis(1-naphthyl)-N,N'-diphenyl-1,1'-biphenyl-4,4'-diamine

CN NPB

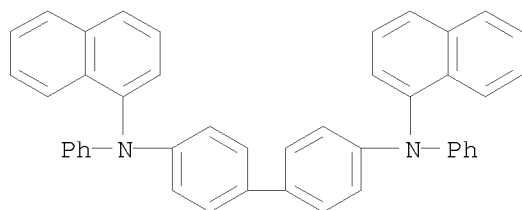
CN NPB (photoreceptor)

CN NPD

CN ST 16/7

MF C44 H32 N2

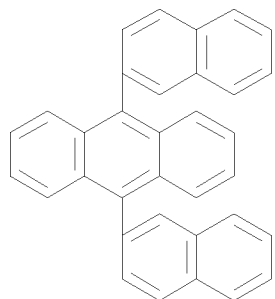
CI COM
 SR CA
 LC STN Files: CA, CAPLUS, CASREACT, CHEMCATS, CSCHEM, TOXCENTER, USPAT2,
 USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4142 REFERENCES IN FILE CA (1907 TO DATE)
 13 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 4186 REFERENCES IN FILE CAPLUS (1907 TO DATE)

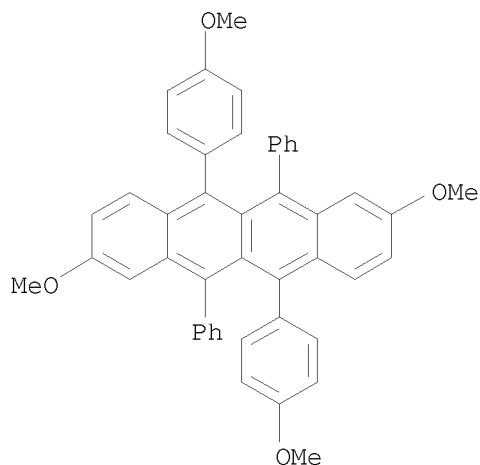
L2 ANSWER 16 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 122648-99-1 REGISTRY
 ED Entered STN: 15 Sep 1989
 CN Anthracene, 9,10-di-2-naphthalenyl- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Anthracene, 9,10-di-2-naphthyl- (6CI)
 OTHER NAMES:
 CN 9,10-Bis(2-naphthyl)anthracene
 CN 9,10-Di(naphthalen-2-yl)anthracene
 CN 9,10-Di-2-naphthylanthracene
 CN ADN
 MF C34 H22
 SR CAOLD
 LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, TOXCENTER,
 USPAT2, USPATFULL
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

202 REFERENCES IN FILE CA (1907 TO DATE)
 3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 204 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 17 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 118769-17-8 REGISTRY
 ED Entered STN: 03 Feb 1989
 CN Naphthacene, 2,8-dimethoxy-5,11-bis(4-methoxyphenyl)-6,12-diphenyl- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Naphthacene, 2,8-dimethoxy-5,11-bis(p-methoxyphenyl)-6,12-diphenyl- (6CI)
 MF C46 H36 O4
 SR CAOLD
 LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, USPAT2, USPATFULL
 (*File contains numerically searchable property data)

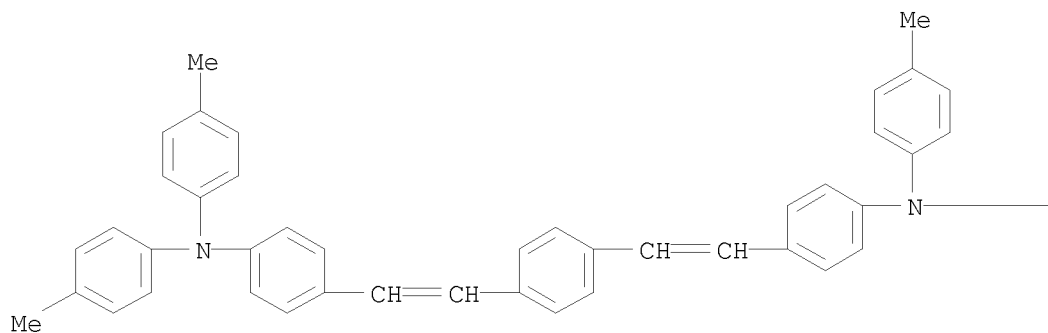


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

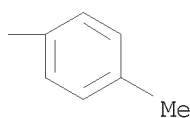
7 REFERENCES IN FILE CA (1907 TO DATE)
 7 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 18 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 55035-43-3 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Benzenamine, 4,4'-(1,4-phenylenedi-2,1-ethenediyl)bis[N,N-bis(4-methylphenyl)- (CA INDEX NAME)
 OTHER NAMES:
 CN 1,4-Bis[2-[4-[N,N-di(p-tolyl)amino]phenyl]vinyl]benzene
 CN 4-(Di-p-Tolylamino)-4'-[(di-p-tolylamino)styryl]stilbene
 CN B 2080
 CN Blue-green 2
 CN OP 31
 MF C50 H44 N2
 CI COM
 LC STN Files: CA, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT2, USPATFULL
 Other Sources: EINECS**, NDSL**, TSCA**
 (**Enter CHEMLIST File for up-to-date regulatory information)

PAGE 1-A



PAGE 1-B



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

143 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
143 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 19 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 51311-17-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Carbon fluoride (CA INDEX NAME)
DR 25136-85-0
MF Unspecified
CI COM, MAN
LC STN Files: AGRICOLA, BIOSIS, CA, CAPLUS, CHEMCATS, CHEMLIST, CIN,
CSCHEM, IFICDB, IFIPAT, IFIUDB, MEDLINE, MSDS-OHS, PIRA, PROMT, RTECS*,
TOXCENTER, USPAT2, USPATFULL, USPATOLD
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

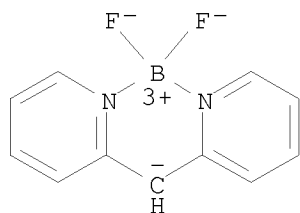
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

681 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
681 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 20 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 42029-62-9 REGISTRY

ED Entered STN: 16 Nov 1984
 CN Boron, difluoro[[2,2'-methylenebis[pyridinato-κN]](1-)]-, (T-4)-
 (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Boron, difluoro[[2,2'-methylenebis[pyridinato]](1-)-N,N']-, (T-4)-
 CN Pyridine, 2,2'-methylenebis-, boron complex
 MF C11 H9 B F2 N2
 CI CCS
 LC STN Files: CA, CAPLUS, USPATFULL



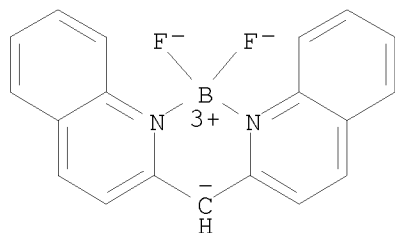
5 REFERENCES IN FILE CA (1907 TO DATE)
 5 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 21 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 37271-44-6 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Silver alloy, nonbase, Ag,Mg (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Silver alloys, magnesium- (4CI)
 MF Ag . Mg
 CI AYS
 LC STN Files: CA, CAPLUS, TOXCENTER, USPAT2, USPATFULL, USPATOLD

Component	Component Registry Number
Ag	7440-22-4
Mg	7439-95-4

1086 REFERENCES IN FILE CA (1907 TO DATE)
 1092 REFERENCES IN FILE CAPLUS (1907 TO DATE)

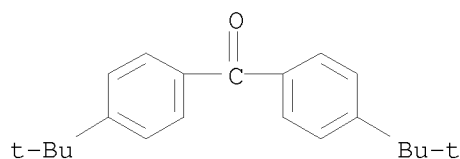
L2 ANSWER 22 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 23786-72-3 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Boron, difluoro[[2,2'-methylenebis[quinolinato-κN]](1-)]-, (T-4)-
 (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Boron, [(1,2-dihydro-2,2'-methylidynediquinolinato)(1-)]difluoro- (8CI)
 MF C19 H13 B F2 N2
 CI CCS
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

9 REFERENCES IN FILE CA (1907 TO DATE)
9 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 23 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 15796-82-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanone, bis[4-(1,1-dimethylethyl)phenyl]- (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Benzophenone, 4,4'-di-tert-butyl- (6CI, 7CI, 8CI)
OTHER NAMES:
CN 4,4'-Di-tert-Butylbenzophenone
CN p,p'-Di-(tert-butyl)benzophenone
MF C21 H26 O
LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS,
CHEMINFORMRX, CSCHEM, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPAT2,
USPATFULL, USPATOLD
(*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

93 REFERENCES IN FILE CA (1907 TO DATE)
93 REFERENCES IN FILE CAPLUS (1907 TO DATE)
5 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 24 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
RN 12798-95-7 REGISTRY
ED Entered STN: 16 Nov 1984
CN Aluminum alloy, nonbase, Al,Li (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Aluminum alloys, lithium- (6CI, 7CI)
DR 104444-79-3
MF Al . Li
CI AYS
LC STN Files: CA, CAPLUS, GMELIN*, IFICDB, IFIPAT, IFIUDB, TOXCENTER,
USPAT2, USPATFULL, USPATOLD
(*File contains numerically searchable property data)

Component Component

	Registry Number
Al	7429-90-5
Li	7439-93-2

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1092 REFERENCES IN FILE CA (1907 TO DATE)
 2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1095 REFERENCES IN FILE CAPLUS (1907 TO DATE)

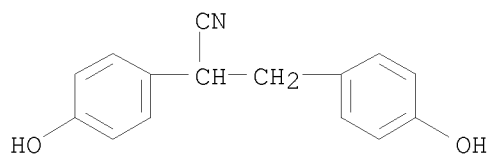
L2 ANSWER 25 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 11099-20-0 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Aluminum alloy, nonbase, Al,Mg (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Aluminum alloys, magnesium- (7CI)
 MF Al . Mg
 CI AYS
 LC STN Files: BIOSIS, CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER,
 USPAT2, USPATFULL, USPATOLD

Component	Component Registry Number
Al	7429-90-5
Mg	7439-95-4

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

3513 REFERENCES IN FILE CA (1907 TO DATE)
 7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 3515 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 26 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN
 RN 1428-67-7 REGISTRY
 ED Entered STN: 16 Nov 1984
 CN Benzenepropanenitrile, 4-hydroxy- α -(4-hydroxyphenyl)- (CA INDEX NAME)
 OTHER CA INDEX NAMES:
 CN Propionitrile, 2,3-bis(p-hydroxyphenyl)- (6CI, 7CI, 8CI)
 OTHER NAMES:
 CN 2,3-Bis(4-hydroxyphenyl)propionitrile
 CN 2,3-Bis(p-hydroxyphenyl)propionitrile
 CN DPN
 MF C15 H13 N O2
 LC STN Files: BEILSTEIN*, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CSCHEM,
 RTECS*, TOXCENTER, USPATFULL, USPATOLD
 (*File contains numerically searchable property data)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

73 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
73 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

L2 ANSWER 27 OF 27 REGISTRY COPYRIGHT 2008 ACS on STN

RN 147-14-8 REGISTRY

ED Entered STN: 16 Nov 1984

CN Copper, [29H,31H-phthalocyaninato(2-)-
κN29,κN30,κN31,κN32]-, (SP-4-1)- (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 29H,31H-Phthalocyanine, copper complex

CN 29H,31H-Phthalocyanine, copper deriv.

OTHER NAMES:

CN (Phthalocyaninato)copper

CN α-Copper phthalocyanine

CN α-Copper phthalocyanine blue

CN α-Phthalocyanine blue

CN β-Copper phthalocyanine blue

CN β-Phthalocyanine blue

CN ε-Copper phthalocyanine

CN 127EPS

CN 405D

CN 7075M

CN 79S26C

CN 79S26C chip

CN Accosperse Cyan Blue GT

CN Acnalin Supra Blue G

CN Acramin Blue F 3G

CN Akrochem 626

CN Aqualine Blue

CN Aquis BW 3571

CN Arlocyanine Blue PS

CN Aztech Chemisperse Cyan 1541

CN B 4G-KR

CN B 702W

CN B 705H

CN B 736

CN B 8M25

CN Bahama Blue BC

CN Bahama Blue BNC

CN Bahama Blue Lake NCF

CN Bahama Blue WD

CN Bermuda Blue

CN BFD 1121

CN BGS 1

CN BGSG-C

CN BL 1531

CN Blue 7110V

CN Blue GLA

CN Blue GLA-SD

CN Blue GLSM

CN Blue Microdis

CN Blue phthalocyanine α-form

CN Blue pigment

CN Blue Toner GTNF

CN BRS 1

CN BRX

CN BT 4651

CN C.I. 74160
CN C.I. Pigment Blue 15
CN C.I. Pigment Blue 15:1

ADDITIONAL NAMES NOT AVAILABLE IN THIS FORMAT - Use FCN, FIDE, or ALL for
DISPLAY

DR 807622-86-2, 819860-69-0, 819860-85-0, 878390-73-9, 924902-00-1,
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CI CCS, COM

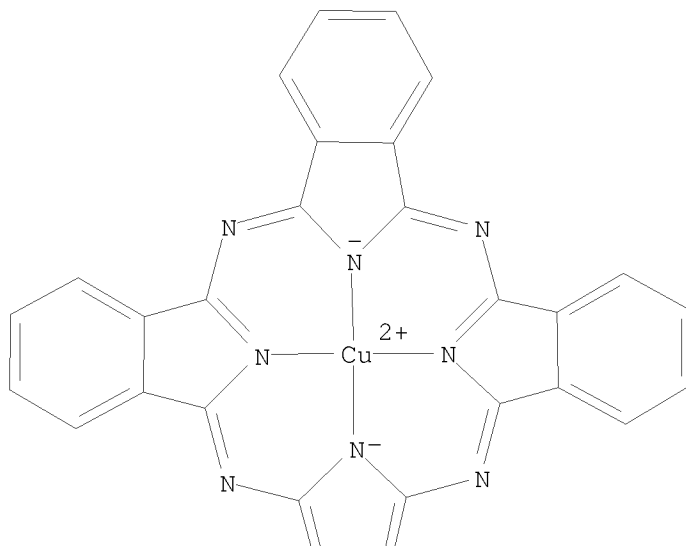
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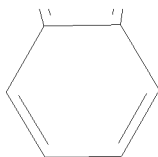
(*File contains numerically searchable property data)

Other Sources: DSL**, EINECS**, TSCA**

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PAGE 1-A





PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

17797 REFERENCES IN FILE CA (1907 TO DATE)
 1297 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 17855 REFERENCES IN FILE CAPLUS (1907 TO DATE)
 134 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> FIL REGISTRY

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=> FIL CAPLUS

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FILE COVERS 1907 - 19 Nov 2008 VOL 149 ISS 21
FILE LAST UPDATED: 18 Nov 2008 (20081118/ED)

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=> S L3

L4 3 L3

=> DIS L4 1- IBIB IABS

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L4 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN
ACCESSION NUMBER: 2005:1026523 CAPLUS
DOCUMENT NUMBER: 143:335928
TITLE: White organic light-emitting devices with improved

performance with hole-transporting layers containing
light-emitting naphthacene derivatives
INVENTOR(S): Begley, William J.; Hatwar, Tukaram K.; Rajeswaran,
Manju; Andrievsky, Natasha
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 49 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20050208327	A1	20050922	US 2004-801997	20040316
WO 2005093008	A1	20051006	WO 2005-US6823	20050302
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EP 1725631	A1	20061129	EP 2005-724382	20050302
EP 1725631	B1	20080423		
R: DE, FR, GB				
JP 2007529597	T	20071025	JP 2007-503929	20050302
KR 2007010004	A	20070119	KR 2006-718888	20060914
PRIORITY APPLN. INFO.:			US 2004-801997	A 20040316
			WO 2005-US6823	W 20050302

OTHER SOURCE(S): MARPAT 143:335928

ABSTRACT:

Organic light-emitting diodes producing white light comprising an anode, a hole-transporting layer disposed over the anode, a blue light-emitting layer disposed over the hole-transporting layer, an electron-transporting layer disposed over the blue light-emitting layer, and a cathode disposed over the electron-transporting layer are described in which the hole-transporting layer comprises an entire layer or a partial portion of a layer in contact with the blue light-emitting layer and contains a selected light-emitting naphthacene derivative (especially a rubrene derivative).

L4 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2005:588313 CAPLUS
DOCUMENT NUMBER: 143:122834
TITLE: White OLED devices with color filter arrays
INVENTOR(S): Hatwar, Tukaram K.; Spindler, Jeffrey P.; Brown,
Christopher T.; Ricks, Michele L.
PATENT ASSIGNEE(S): Eastman Kodak Company, USA
SOURCE: U.S. Pat. Appl. Publ., 31 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20050147844	A1	20050707	US 2004-751352	20040105
WO 2005069397	A2	20050728	WO 2004-US43533	20041222
WO 2005069397	A3	20060112		
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			WO 2004-US43533	W 20041222

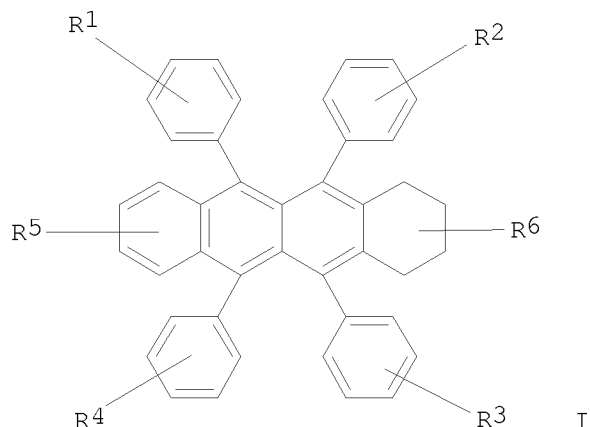
ABSTRACT:

White organic light-emitting devices including a color filter array including ≥ 3 sep. filters having bandpass spectra for passing red, green, and blue light, resp. in response to white light to produce preselected color outputs disposed over an electroluminescent element with a light-emitting structure including ≥ 2 dopants for collectively emitting white light are described in which the composition of ≥ 1 of the dopants is selected to change the spectrum of the white light to be compatible with the spectrum of the color filters by having peak responses in the white light spectrum corresponding to the bandpass spectra of the red and blue color filters whereby the white light more effectively matches the responses of the color filters.

L4 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:252040 CAPLUS
DOCUMENT NUMBER: 140:311689
TITLE: White organic light-emitting devices with improved performance
INVENTOR(S): Hatwar, Tukaram K.
PATENT ASSIGNEE(S): Eastman Kodak Company, USA
SOURCE: U.S. Pat. Appl. Publ., 34 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040058193	A1	20040325	US 2002-244314	20020916
JP 2004134396	A	20040430	JP 2003-323021	20030916
CN 1496208	A	20040512	CN 2003-158687	20030916
PRIORITY APPLN. INFO.:			US 2002-244314	A 20020916
OTHER SOURCE(S):			MARPAT 140:311689	
GRAPHIC IMAGE:				



ABSTRACT:

An white-light organic light-emitting diode (OLED) device is described comprising, in order, an anode; a hole-transporting layer; a doped blue light-emitting layer; an electron-transporting layer a cathode; and the hole-transporting layer and/or electron-transporting layer, selectively doped with the compound of general formula I which emits light in the yellow region of the spectrum which corresponds to an entire layer or a partial portion of a layer in contact with the blue light-emitting layer; wherein R1-R6 represent one or more substituents on each ring where each substituent is individually selected from (1)H, or alkyl C1-C24; (2) (substituted)aryl of C5-C20; (3)C4-C24 necessary to complete a fused aromatic ring of naphthyl, anthracenyl, phenanthryl, pyrenyl, or perylenyl; (4)heteroaryl or substituted heteroaryl of C5-C24 such as thiazolyl, furyl, thienyl, pyridyl, quinolinyl or other heterocyclic systems, which may be bonded via a single bond, or may complete a fused heteroarom. ring system; (5)alkoxylamino, alkylamino, or arylamino of C1-C24; or (6) fluorine, chlorine, bromine or cyano, except R5 and R6 do not form a fused ring, and at least one of the substituents R1, R2, R3, and R4 are substituted with a group other than H.

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L6 28 L5

=> S L6 AND 1950<=PY<=2003

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=> S L6 AND 1950<=PY<=2004

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L8 1 L6 AND 1950<=PY<=2004

=> DIS L8 1 TI

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

TI White organic light-emitting devices with improved performance

=> DIS L8 1 IBIB IABS

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L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:252040 CAPLUS

DOCUMENT NUMBER: 140:311689

TITLE: White organic light-emitting devices with improved performance

INVENTOR(S): Hatwar, Tukaram K.

PATENT ASSIGNEE(S): Eastman Kodak Company, USA

SOURCE: U.S. Pat. Appl. Publ., 34 pp.

CODEN: USXXCO

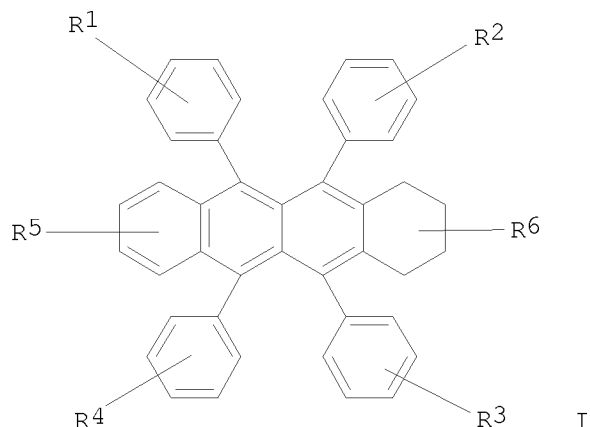
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 20040058193	A1	20040325	US 2002-244314	20020916 <--
JP 2004134396	A	20040430	JP 2003-323021	20030916 <--
CN 1496208	A	20040512	CN 2003-158687	20030916 <--
PRIORITY APPLN. INFO.:			US 2002-244314	A 20020916
OTHER SOURCE(S):	MARPAT	140:311689		
GRAPHIC IMAGE:				



ABSTRACT:

An white-light organic light-emitting diode (OLED) device is described comprising, in order, an anode; a hole-transporting layer; a doped blue light-emitting layer; an electron-transporting layer a cathode; and the hole-transporting layer and/or electron-transporting layer, selectively doped with the compound of general formula I which emits light in the yellow region of the spectrum which corresponds to an entire layer or a partial portion of a layer in contact with the blue light-emitting layer; wherein R1-R6 represent one or more substituents on each ring where each substituent is individually selected from (1)H, or alkyl C1-C24; (2) (substituted)aryl of C5-C20; (3)C4-C24 necessary to complete a fused aromatic ring of naphthyl, anthracenyl, phenanthryl, pyrenyl, or perylenyl; (4)heteroaryl or substituted heteroaryl of C5-C24 such as thiazolyl, furyl, thienyl, pyridyl, quinolinyl or other heterocyclic systems, which may be bonded via a single bond, or may complete a fused heteroarom. ring system; (5)alkoxylamino, alkylamino, or arylamino of C1-C24; or (6) fluorine, chlorine, bromine or cyano, except R5 and R6 do not form a fused ring, and at least one of the substituents R1, R2, R3, and R4 are substituted with a group other than H.

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=> FIL CAPLUS

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=> S L9

L10 7 L9

=> S L10 AND 1950<=PY<=2004

23299814 1950<=PY<=2004

L11 5 L10 AND 1950<=PY<=2004

=> DIS L11 1- IBIB IABS

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L11 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1957:66558 CAPLUS

DOCUMENT NUMBER: 51:66558

ORIGINAL REFERENCE NO.: 51:12055c-i,12056a-b

TITLE: Benz- and naphthindantrione

AUTHOR(S): Meier, Richard; Lotter, Hans Georg

CORPORATE SOURCE: Univ. Freiburg i. B., Germany

SOURCE: Chemische Berichte (1957), 90, 222-8

CODEN: CHBEAM; ISSN: 0009-2940

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

ABSTRACT:

The ninhydrin homologs 4,5-(I) and 5,6-benzindan-1,2,3-trione (II) are synthesized. Refluxing 14 g. 1,2-C₁₀H₆(CO)₂O in 120 cc. MeOH saturated with HCl 8 hrs. yields 89% 1,2-C₁₀H₆(CO₂Me)₂ (III), prisms, m. 84-5°. Refluxing 20 g. 2,3-C₁₀H₆(CO₂H)₂ 12-15 hrs. in 200 cc. MeOH saturated with HCl, concentrating the solution in vacuo to 70-80 cc., pouring it into 500 cc. H₂O, and extracting with C₆H₆ give 79% 2,3-C₁₀H₆(CO₂Me)₂ (IV), b₁ 141-5°, m. 48-50°. Condensation of 12 g. III and 25 g. EtOAc in the presence of 30 cc. xylene according to the method of Noto (C.A. 10, 1515) yields 73% 4,5-benzindan-1,3-dione (V), long yellow needles, m. 174-5° (decomposition). Heating 6 g. IV and 12.5 g. EtOAc with 2 g. Na 2 hrs. on an H₂O bath, adding 100 cc. Et₂O, keeping the mixture overnight, and recrystg. the washed (Et₂O) precipitate from 800 cc. boiling H₂O give 79% 5,6-benzindan-1,3-dione (VI), golden-yellow needles, m. 223-5° (decomposition). Heating 5 g. V in 50 cc. PhNO₂ with 2.8 g. SeO₂ 6 hrs. at 150°, steam distilling the filtered solution, adding 150 cc. AcOH to the residue, making up the mixture with H₂O to 1 l., and refluxing it for some time yield 53% 4,5-benzindan-1,2,3-trione-H₂O (VII), yellow needles, losing its H₂O at 150-60° and m. 244-6° (decomposition). Recrystn. of the AcOH-insol. part gives yellow crystals, sintering at 250°, m. 265-6° (decomposition), which may be a bis(benzindandione). Distilling very slowly 0.5 g. VII and 0.5 g. alanine in 200 cc. H₂O in a CO₂ current into a trap containing 2,4-(O₂N)₂C₆H₃NHNH₂ in N HCl yields AcH phenylhydrazone (VIII). From the distillation residue a red-violet compound, C₂₆H₁₃O₄N, decompose 330°, is isolated. Heating 5.7 g. VI in 100 cc. PhNO₂ with 3.3 g. SeO₂ 15 hrs. at 150°, steam-distilling the filtered solution, and extracting the residue with 700 cc. hot H₂O yield 23% 5,6-benzindan-1,2,3-trione-H₂O, needles, losing its H₂O at 145-50° and turning green, m. 279-82° (decomposition); when treated with alanine as above it yields 1.1 millimole VIII and a compound, C₂₆H₁₃O₄N,

black-brown, decompose 325° without melting. Warming 2 g. V in 80 cc. AcOH with 2 cc. fuming HNO₃ 20 min. at 58-60°, keeping the mixture 1 hr. at 20°, and pouring it into 200 cc. H₂O give 1.4 g. of what may be a hydroxybis(benzindandione), yellow crystals, m. 207-10° (decomposition), which, brominated in AcOH with Br at 100°, yields 1.2 g. 2,2-dibromo-4,5-benzindan-1,3-dione (IX), yellow needles, m. 243-5° (decomposition). IX is also obtained in 83% yield when 1 g. V is warmed in 30 cc. CHCl₃, with 0.6 cc. Br on an H₂O bath. Heating 0.5 g. VI with 0.3 cc. Br in 20 cc. CHCl₃ 10 min. on an H₂O bath gives 89% 2,2-dibromo-5,6-benzindan-1,3-dione, yellow needles, m. 272-3° (decomposition). Adding 0.6 g. iso-AmONO with ice-cooling and then 1 g. V to 0.12 g. Na in 10 cc. absolute EtOH, keeping the mixture 4-5 days at 20°, washing the precipitate with Et₂O, dissolving the brick-red Na salt in 500 cc. H₂O, and adding 0.25 g. AcOH yield 61% 2-isonitroso-4,5-benzindan-1,3-dione, yellow, m. 221-3° (decomposition). Refluxing 21 g. anthracene-1,2-dicarboxylic acid 1 hr. in 200 cc. MeOH saturated with HCl, keeping the mixture 3 days, and refluxing it again 3 hrs. give 65% di-Me ester (X), leaflets, m. 114-15°; di-Me anthracene-2,3-dicarboxylate (XI), 87%, leaflets, m. 117-18°. Refluxing 3.5 g. X in 7 cc. EtOAc and 10 cc. C₆H₆ with 1 g. Na 12 hrs. with occasional shaking, decomposing the washed (Et₂O) Na salt of the 2-carbethoxy-1,3-diketone with 100 cc. concentrated HCl, heating the mixture 5 hrs. on a H₂O bath, and subliming the precipitate at 140-50°/1 mm. yield 48% naphth[2',3',4,5]-indan-1,3-dione (XII), orange-yellow crystals, or yellow leaflets from C₆H₆, m. 246-7° (decomposition). SeO₂ oxidation of XII gives no definite product. Similar condensation of 7 g. XI with 14 cc. absolute EtOAc and 2 g. Na in 20 cc. C₆H₆ yields 35% naphth[2',3',5,6]indan-1,3-dione, subliming at 170-80°/1 mm., yellow crystals, m. 249-51° (decomposition), which, oxidized with SeO₂, gives a few mg. of orange crystals, m. 343-6° (decomposition).

L11 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1957:66557 CAPLUS
DOCUMENT NUMBER: 51:66557
ORIGINAL REFERENCE NO.: 51:12055c
TITLE: Diarylphenylenenaphthacene derived from a

tetramethoxyrubrere
AUTHOR(S): Perronnet, Jacques
SOURCE: Compt. rend. (1957), 244, 1053-6
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
ABSTRACT:

A trimethoxydiarylphenylenenaphthacene (I), C₃₉H₂₈O₃, m. 263-4°, was prepared from a tetramethoxyrubrere (II) by two different methods. Comparison of I with an unknown compound formed in the preparation of II revealed several differences.

L11 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1957:66556 CAPLUS
DOCUMENT NUMBER: 51:66556
ORIGINAL REFERENCE NO.: 51:12055a-c
TITLE: Carboxylic acids of coronene
AUTHOR(S): Hopff, H.; Schweizer, H. R.
CORPORATE SOURCE: Eidg. Tech. Hochschule, Zurich, Switz.
SOURCE: Chimia (1957), 11, 97-8
CODEN: CHIMAD; ISSN: 0009-4293

DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
ABSTRACT:

Coronene (I) with a complex of NH₂COC1 and anhydrous AlCl₃ formed various amides.

With o-C₆H₄Cl₂ as a solvent, mainly the monoamide was obtained; with PhNO₂ mainly a diamide. Saponification with alkali in MeOH at 180° yielded the salts of the corresponding acids, separated by fractional precipitation. The monocarboxylic acid and its Me ester and anilide were prepared. The tri-Me ester of the tricarboxylic acid was isolated by chromatography of the polycarboxylic acid fraction. Sublimation with soda lime yielded I. Some (acylamino)anthraquinone derivs. were prepared from the mono- and dicarboxylic acids. Only those from the latter gave good dyes.

L11 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1956:16251 CAPLUS
DOCUMENT NUMBER: 50:16251
ORIGINAL REFERENCE NO.: 50:3369c-e
TITLE: Determination of the structures of eight methoxy tetraphenylnaphthacenes
AUTHOR(S): Dufraisse, Charles; Etienne, Andre; Valls, Jaime
SOURCE: Compt. rend. (1955), 240, 2097-2100
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
ABSTRACT:

cf. C.A. 49, 6896h. The structures of the following substituted naphthacenes were assigned: 2,8-(MeO)₂, 5,6,11,12-Ph₄ (I), m. 259°; 2-MeO, 11-(p-MeOC₆H₄), 5,6,12-Ph₃ (II), m. 227°; 5,11-(p-MeOC₆H₄)₂, 6,12-Ph₂ (III), m. 252°; 2,8-(MeO)₂, 5,11-(p-MeOC₆H₄)₂, 6,12-Ph₂ (IV), m. 257°; 2,8-(MeO)₂, 6,12-(p-MeOC₆H₄)₂, 5,11-Ph₂ (V), m. 250°; 8-MeO, 5,6,12-(p-MeOC₆H₄)₃, 11-Ph (VI), m. 226°; 5,6,11,12-(p-MeOC₆H₄)₄ (VII), m. 282°; and 2,8-(MeO)₂, 5,6,11,12-(p-MeOC₆H₄)₄ (VIII), m. 255°. The structures of III, IV, and VIII are known; those of the other compds. are assigned on the basis of m.ps., relative adsorption on Al₂O₃ on chromatog. (in order of decreasing adsorption, III, II, I; and VII, VI, V), and UV absorption spectra (the appearance of new absorption peaks in the spectra of I, II, IV, V, VI, and VIII is attributed to direct attachment of MeO to the naphthacene ring).

L11 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1955:35916 CAPLUS
DOCUMENT NUMBER: 49:35916
ORIGINAL REFERENCE NO.: 49:6896h-i, 6897a-b
TITLE: Systematic enumeration of the methoxylated rubrenes obtainable by rubrenic reactions
AUTHOR(S): Dufraisse, Charles; Etienne, Andre; Valls, Jaime
SOURCE: Compt. rend. (1954), 239, 1101-4
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
ABSTRACT:

Eight methoxylated rubrenes were obtained from the 5 p-methoxy triphenylpropargyl alcs. by rubrenic condensation of the hydrochlorides of the corresponding propargyl alcs. or of their chloride esters. This is exactly the number of methoxylated rubrenes predicted on the basis of a centrosym. reaction scheme. The rubrenes obtained were: 9,11-di(p-methoxyphenyl)-10,12-diphenylnaphthacene [from Ph₂C(OH)C.tplbond.CC₆H₄OMe-p or p-MeOC₆H₄PhC(OH)C.tplbond.CPh]; 9-p-methoxyphenyl-10,11,12-triphenyl-2-methoxynaphthacene, m. 227°, and 9,10,11,12-tetraphenyl-2,6-dimethoxynaphthacene, m. 259° [from p-MeOC₆H₄PhC(OH)C.tplbond.CPh]; 9,11-di(p-methoxyphenyl)-10,12-diphenyl-2,6-dimethoxynaphthacene, m. 257° [from (p-MeOC₆H₄)₂C(OH)C.tplbond.CPh]; 9,11-di(p-methoxyphenyl)-10,12-diphenyl-3,7-dimethoxynaphthacene, m. 250°; 9,10,11-tri(p-methoxyphenyl)-12-phenyl-7-methoxynaphthacene, m.

226° (C6H6 solvate, m. 195°); and
9,10,11,12-tetra(p-methoxyphenyl)naphthacene, m. 282° (C6H6 solvate, m.
245°) [from p-MeOC6H4PhC(OH)C.tplbond.CC6H4OMe-p]; and
9,10,11,12-tetra(p-methoxyphenyl)-2,6-dimethoxynaphthacene, m. 255°
[from (p-MeOC6H4)2C(OH)C.tplbond.CC6H4OMe-p]. Addnl. products, as yet
unidentified, were also obtained; these were, however, shown not to have the
rubrenic structure.

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